

**Title 2, Division 3, Chapter 1,**

**Article 4.8. ~~The Collection of Information Relating to Hull Husbandry Practices  
of Vessels for Control of Marine Invasive Species in Waters of California~~  
Biofouling Management Regulations for Vessels Operating in California  
Waters**

**~~Section 2298. Hull Husbandry Reporting Form.~~**

- (a) ~~Section 71205(e) of the Public Resources Code requires the master, owner, operator, agent, or person in charge of a vessel carrying, or capable of carrying, ballast water into the coastal waters of the State to file the "Hull Husbandry Reporting Form" developed by the California State Lands Commission providing information regarding the hull husbandry practices relating to the vessel, within 60 days of receiving a written or electronic request from the Commission.~~
- (b) ~~The following form "Hull Husbandry Reporting Form" is hereby incorporated by reference and shall be used by the master, owner, operator, agent, or person in charge of a vessel carrying, or capable of carrying, ballast water into the coastal waters of the State to comply with the provisions of Section 71205(e) of the Public Resources Code.~~

Authority: ~~Public Resources Code Sections 71201 and 71204.6~~

Reference: ~~Public Resources Code Sections 71205(e) and 71205(f)~~

**Section 2298.1. Purpose, Applicability, and Date of Implementation.**

- (a) The purpose of the regulations in Title 2, Division 3, Chapter 1, Article 4.8 of the California Code of Regulations is to move the state expeditiously toward elimination of the discharge of nonindigenous species into the waters of the state or into waters that may impact the waters of the state, based on the best available technology economically achievable.
- (b) The provisions of Article 4.8 apply to all vessels carrying, or capable of carrying, ballast water, that operate in the waters of the state except those that are exempt under Section 71202 of the Public Resources Code.
- (c) The provisions of these regulations become effective January 1, 2013.

Authority Cited: Sections 71201, 71201.7, 71202 and 71204.6, Public Resources Code

Reference Cited: Sections 71200, 71201, 71201.7, 71202, 71204.6, 71205 and 71207, Public Resources Code

## **Section 2298.2. Definitions.**

Unless the context otherwise requires, the following definitions shall govern the construction of this Article:

- (a) “Anti-fouling system” means a coating, paint, surface treatment, surface, or device that is used on a vessel to minimize or prevent attachment or association of biofouling.

  - (1) “Marine Growth Prevention System (MGPS)” means an anti-fouling system device used to reduce or prevent biofouling accumulation in internal seawater systems and sea chests and can include the use of anodes, injection systems and electrolysis.
- (b) “Biofouling,” also referred to as hull fouling or marine growth, means the attachment or association of marine organisms to the wetted portions of a vessel or its appurtenances, including, but not limited to, sea chests, propellers, anchors and associated chains, and other niche areas. Biofouling can include microfouling and macrofouling.
- (c) “Commission” means the State Lands Commission.
- (d) “Division Chief” means the Chief of the Marine Facilities Division of the State Lands Commission or any employee of the Marine Facilities Division authorized by the Chief to act on his or her behalf.
- (e) “Extended residency period” means remaining in one port, place or shared waters for ninety days or longer.
- (f) “In-water cleaning” means the physical removal of biofouling from the wetted portions of a vessel while the vessel remains in the water.
- (g) “In-water inspection” means underwater survey or inspection by divers (including inspections conducted with remotely operated vehicles). Inspections for purposes other than surveying biofouling may be considered opportunities for evaluating biofouling extent.
- (h) “In-water treatment” means any method or process that is aimed at sterilizing biofouling from the wetted portions of a vessel while the vessel remains in the water. Sterilization may render organisms inactive, but any hard parts or remnants that remain may serve as suitable substrate to facilitate further biofouling and will still be considered biofouling for the purposes of Article 4.8 unless successful in-water treatment occurs no more than twenty days prior to arrival to a California port or place.

- (i) “Macrofouling” means large, distinct multicellular organisms visible to the human eye such as barnacles, tubeworms or fronds of algae.
- (j) “Microfouling” means microscopic organisms including, but not limited to, bacteria, single-celled algae and the slimy substances that they produce. Biofouling comprised of only microfouling is commonly referred to as a slime layer.
- (k) “Niche area” means an area on a vessel that may be more susceptible to biofouling due to variable hydrodynamic forces, susceptibility to coating system wear or damage, or due to inadequate protection by anti-fouling systems. Examples of niche areas include sea chests, bow thrusters, propeller shafts, inlet gratings, and out-of-water support strips.
- (l) “Out-of-water maintenance” means removal of the vessel from the water and into a dry dock or slipway for inspection or maintenance.
- (m) “Out-of-water support strips” means sections of the hull that rested on support blocks while the vessel was out of water in a dry dock or slipway. These areas are typically not cleaned and treated with fresh anti-fouling systems, resulting in reduced anti-fouling protection.
- (n) “Percentage cover” means the percentage of the total surface area under examination that is occupied by biofouling.
- (o) “Shared waters” means either of the following:
  - (1) All ports and places in the San Francisco Bay area east of the Golden Gate bridge including the Ports of Stockton and Sacramento; or
  - (2) The Ports of Los Angeles, Long Beach and the El Segundo marine terminal.
- (p) “Vessel” means a vessel of 300 gross registered tons or more.
- (q) “Waterline” means the area along the external hull of a vessel where the surface of the water interfaces with the air. The waterline is not a fixed location; its placement is dependent on loading and ballasting operations.
- (r) “Wetted portion of a vessel” means all parts of a vessel's hull and structures that are either submerged in water when the vessel is loaded to the deepest permissible legal draft or associated with internal piping structures in contact with water taken onboard.

Authority Cited: Sections 71201, 71201.7 and 71204.6, Public Resources Code

Reference Cited: Sections 71200, 71201, 71201.7, 71204.6, 71205 and 71207, Public Resources Code

**Section 2298.3. Performance Standards for Biofouling Management.**

- (a) Performance standards for biofouling management shall be based on the following Level of Fouling Ranking Scale:
- (1) Rank 0 (zero) – No visible biofouling. Wetted portions of the vessel are entirely clean with no observable microfouling.
  - (2) Rank 1 (one) – Microfouling only. Wetted portions of the vessel are partially or entirely covered in microfouling with no observable macrofouling.
  - (3) Rank 2 (two) – Light biofouling. Wetted portions of the vessel are covered in microfouling with small patches of macrofouling covering no more than five percent of the wetted surface being evaluated.
  - (4) Rank 3 (three) – Considerable biofouling. Wetted portions of the vessel are covered in microfouling with patchy but clearly visible macrofouling covering greater than five percent but no more than fifteen percent of the wetted surface being evaluated.
  - (5) Rank 4 (four) – Extensive biofouling. Wetted portions of the vessel are covered in microfouling with abundant macrofouling covering greater than fifteen percent but no more than forty percent of the wetted surface being evaluated.
  - (6) Rank 5 (five) – Very heavy biofouling. Wetted portions of the vessel are covered in microfouling with abundant macrofouling assemblages covering greater than forty percent of the wetted surface being evaluated.
- (b) For new vessels delivered on or after January 1, 2013, for existing vessels beginning with completion of the first out-of-water maintenance on or after January 1, 2013, and for all vessels subject to 2CCR§2298.6, the master, owner, operator, or person in charge of a vessel arriving to a California port or place shall:
- (1) Maintain or clean the vessel so that upon arrival, the following niche areas are at or below Rank 2 (two) on the Level of Fouling Ranking Scale described in 2CCR§2298.3(a):
    - (A) Sea chests and sea chest gratings;
    - (B) Bow and stern thrusters, including gratings;

(C) Fin Stabilizers, if present;

(D) Out-of-water support strips;

(E) Propeller and propeller shaft; and

(F) Rudder;

(2) Maintain or clean the vessel so that upon arrival, the wetted portions of the vessel, except those niche areas described in 2CCR§2298.3(b)(1), are at or below Rank 1 (one) on the Level of Fouling Ranking Scale described in 2CCR§2298.3(a). Filamentous or turf algae at the waterline, including one meter above and one meter below the waterline, shall be excluded from this Level of Fouling Rank; and

(3) Maintain documentation that the niche areas described in 2CCR§2298.3(b)(1) and other wetted portions of the vessel have been evaluated, according to the following schedule, to ensure compliance with Subparts (1) and (2) of this section upon arrival to a California port or place:

(A) No longer than six months prior to arrival to a California port or place;  
or

(B) No longer than twelve months prior to arrival to a California port or place if:

(i) The vessel was delivered as new within the twelve months prior to arrival; or

(ii) The vessel underwent full application of one or more anti-fouling coatings during out-of-water maintenance and was refloated within the twelve months prior to arrival.

(C) If an evaluation cannot take place due to safety concerns for the vessel, its crew, contractor, or inspector, a safety postponement of one month may be claimed. If the safety postponement is claimed, documentation certified by the master shall be included in the Biofouling Record Book described in 2CCR§2298.5 and shall, upon request, be made available to the commission for inspection. Safety postponement documentation must include:

(i) Port, country, and date of postponed evaluation;

- (ii) Specific reasons for the safety postponement (e.g. elevated current speed, decreased visibility);
- (iii) Port, country, and dates of the two preceding port calls, prior to the postponed evaluation;
- (iv) Port, country, and date of rescheduled evaluation;
- (v) Signature of vessel master certifying the safety postponement.

Authority Cited: Sections 71201, 71201.7 and 71204.6, Public Resources Code

Reference Cited: Sections 71200, 71201, 71201.7, 71203, 71204.6, 71205 and 71207 Public Resources Code

#### **Section 2298.4. Biofouling Management Plan.**

The master, owner, operator, or person in charge of a vessel carrying, or capable of carrying, ballast water that operates in the waters of the state shall:

- (a) Maintain a biofouling management plan that was prepared specifically for the vessel and that shall, upon request, be made available to the commission for inspection and review. This plan shall be specific to each vessel and shall provide a description of the biofouling management strategy for the vessel that is sufficiently detailed to allow a master or other appropriate ship's officer or crew member serving on that vessel to understand and follow the biofouling management strategy. This plan shall, at a minimum, include a:
  - (1) Copy of the vessel's General Arrangement, including diagram;
  - (2) Copy of the vessel's docking plan from the two most recent out-of-water maintenance operations;
  - (3) List of the vessel's niche areas that are susceptible to biofouling;
  - (4) Description of anti-fouling systems used, including those used for niche areas. Description shall include, at a minimum:
    - (A) Manufacturer name, model name, and product number;
    - (B) Recommended operating conditions suitable for the antifouling system;
  - (5) Description of the vessel's normal operating profile used to determine the performance specifications of the antifouling systems, including but not limited to:

- (A) Operating speeds;
- (B) Percent of time underway at sea compared with percent of time berthed, anchored, moored, or adrift;
- (C) Operating areas or trading routes;
- (D) Planned duration between anti-fouling coating renewals; and
- (6) Schedule of planned inspections, repairs, maintenance and renewal of antifouling systems;
- (b) Train, and maintain records of training for, the master, operator, person in charge, and those members of the crew who have responsibilities under the vessel's biofouling management plan, on the application of biofouling management and treatment procedures, as well as procedures described in this section, in order to minimize other releases of nonindigenous species from vessels.

Authority Cited: Sections 71201, 71201.7 and 71204.6, Public Resources Code

Reference Cited: Sections 71200, 71201, 71201.7, 71204.6, 71205 and 71207, Public Resources Code

#### **Section 2298.5. Biofouling Record Book.**

The master, owner, operator, or person in charge of a vessel carrying, or capable of carrying, ballast water that operates in the waters of the state shall maintain a biofouling record book to be retained onboard the vessel. This record book must record details of all inspections and biofouling management measures undertaken on the vessel, including, at a minimum:

- (a) A description of the anti-fouling systems installed or applied, including, but not limited to:
  - (1) Specific location on vessel where installed or applied, including niche areas:
    - (A) For MGPS, indicate whether installed in sea chest or strainer;
  - (2) Date installed or applied;
  - (3) Dates and description of planned or unplanned maintenance;

- (4) Dates and description of any occurrences where the system was malfunctioning or out of service;
  - (5) Where applicable, instructions on its operation, including frequency and duration of use; and
  - (6) For anti-fouling coatings, a copy of the International Maritime Organization's International Anti-fouling System Certificate;
- (b) Information from the most recent out-of-water maintenance, which shall include, at a minimum, the following:
  - (1) Dates and geographic location of dry docking or slipping;
  - (2) Description of the measures and methods taken to remove biofouling or to renew or repair the anti-fouling system;
  - (3) Date the vessel was re-floated;
- (c) Copies of reports from all in-water inspections or surveys undertaken since the most recent out-of-water maintenance. Reports shall include, at a minimum, the following:
  - (1) Dates and locations of in-water inspections or surveys;
  - (2) Description of the areas of the vessel inspected or surveyed for biofouling;
  - (3) Methods used for inspection or survey (e.g. divers, remotely operated vehicles);
  - (4) Description of biofouling samples collected, if any;
  - (5) Description of the observed percentage cover of biofouling on the hull and niche areas described in 2CCR§2298.3(b);
  - (6) Photographs (which may include DVD of video or closed-circuit television) of the wetted surfaces of the hull and niche areas described in 2CCR§2298.3(b);
  - (7) Indication of whether any corrective action taken to address observed biofouling was necessary;
- (d) Copies of reports from all in-water treatment, in-water cleaning and propeller polishing activities undertaken since the most recent out-of-water maintenance. Reports shall include, at a minimum, the following:



- (1) Dates and locations of in-water treatment, in-water cleaning and propeller polishing;
  - (2) Description of the areas of the vessel that are treated or cleaned;
  - (3) Description of reason(s) for treatment, cleaning or polishing;
  - (4) Description of the method of treatment or cleaning used (e.g. number of brushes, brush type);
  - (5) If applicable, description of debris capture and/or waste disposal method;
  - (6) Description of the post-cleaning percentage cover of biofouling on the hull and niche areas described in 2CCR§2298.3(b);
  - (7) Post-cleaning photographs (which may include DVD of video or closed-circuit television) of the wetted surfaces of the hull and niche areas described in 2CCR§2298.3(b);
- (e) Details of inspection and maintenance of sea chests and internal seawater systems that have been undertaken since the most recent out-of-water maintenance. Details shall include, but are not limited to, the following:
- (1) Dates of inspection or maintenance;
  - (2) Description of reason(s) for inspection or maintenance;
  - (3) Description of maintenance performed, and whether system is operating normally post-maintenance;
  - (4) Corrective action taken to address observed biofouling and any reported blockages;
- (f) Description of any occurrences since the most recent out-of-water maintenance when the vessel has been operating outside of its normal operating profile described in the biofouling management plan; and
- (g) Description of any occurrences since the most recent out-of-water maintenance when the vessel remained in the same port, place or shared waters for ten days or more. Details shall include, at a minimum:
- (1) Geographic location where vessel remained for ten days or more;
  - (2) Date of arrival to port, place, or shared waters where vessel remained for ten days or more;

- (3) Date of departure from port, place, or shared waters where vessel remained for ten days or more;
- (4) Any biofouling maintenance undertaken prior to, during and following ten day (or more) residency period.

Authority Cited: Sections 71201, 71201.7 and 71204.6, Public Resources Code

Reference Cited: Sections 71200, 71201, 71201.7, 71204.6, 71205 and 71207, Public Resources Code

### **Section 2298.6. Requirements for Vessels with Extended Residency Periods.**

The master, owner, operator, or person in charge of a vessel arriving to a California port or place after an extended residency period must ensure that the vessel completes one of the following prior to arrival:

- (a) Undergo in-water inspection following the extended residency period to ensure compliance with the performance standards described in 2CCR§2298.3 upon arrival to a California port or place.
  - (1) If in-water inspection reveals that performance standards described in 2CCR§2298.3 will not be met, then vessel must satisfy either subdivision (b) or subdivision (c) of this section;
  - (2) In-water inspection report must be kept in Biofouling Record Book described in 2CCR§2298.4 and must include, at a minimum, all of the following for the vessel hull and each of the niche areas described in 2CCR§2298.3(b):
    - (A) Written description of the percentage cover of biofouling;
    - (B) Photographs (may include DVD of video or closed-circuit television) of the wetted surfaces; or
- (b) Undergo in-water cleaning following the extended residency period to ensure compliance with the performance standards described in 2CCR§2298.3 upon arrival to a California port or place.
  - (1) In-water cleaning report must be kept in Biofouling Record Book described in 2CCR§2298.4 and must include, at a minimum, all of the following for the vessel hull and each of the niche areas described in 2CCR§2298.3(b):
    - (A) Written description of the percentage cover of biofouling post-cleaning;

- (B) Photographs (which may include DVD of video or closed-circuit television) of the wetted surfaces post-cleaning; or
- (c) Undergo out-of-water dry docking or slipping and removal of biofouling from the niche areas and other wetted portions of the vessel following the extended residency period to ensure compliance with the performance standards described in 2CCR§2298.3 upon arrival to a California port or place.
  - (1) Documentation from the out-of-water maintenance facility must be kept in Biofouling Record Book described in 2CCR§2298.5 and must include, at a minimum, all of the following for the vessel hull and each of the niche areas described in 2CCR§2298.3(b):
    - (A) Written description of the percentage cover of biofouling post-cleaning;
    - (B) Photographs (which may include video or closed-circuit television) of the wetted surfaces post-cleaning.

Authority Cited: Sections 71201, 71201.7 and 71204.6, Public Resources Code

Reference Cited: Sections 71200, 71201, 71201.7, 71204.6 and 71205, Public Resources Code

### **Section 2298.7. Hull Husbandry Reporting Form.**

The form “Hull Husbandry Reporting Form (Revised August 18, 2011)” is hereby incorporated by reference. The master, owner, operator, agent or person in charge of a vessel carrying, or capable of carrying, ballast water into the coastal waters of the State shall submit the form “Hull Husbandry Reporting Form (Revised August 18, 2011)” to the Commission in written or electronic form twenty-four hours in advance of the first arrival of each calendar year to a California port or place of call.

Authority Cited: Sections 71201, 71201.7 and 71204.6, Public Resources Code

Reference Cited: Sections 71200, 71201, 71201.7, 71204.6, 71204, 71205 and 71207, Public Resources Code

### **Section 2298.8. Alternatives.**

- (a) Petitions for Alternatives.
  - (1) Any person subject to these regulations may submit a petition to the Division Chief for alternatives to the requirements of Article 4.8 as applied to the petitioner.

(2) All petitions for alternatives must be submitted in writing. A petition may be in any form, but it must contain all data and information necessary to evaluate its merits in order to fulfill the purposes of these regulations.

(3) All petitions for alternatives must be submitted and must receive approval prior to the vessel's arrival to a California port or place.

(b) Response to Petitions.

(1) The Division Chief shall respond in writing to any petition for alternatives within thirty days of receipt of the petition.

(c) Approval of Alternatives.

(1) The Division Chief may approve any proposed alternatives to the requirements of Article 4.8 if he or she determines that the proposed alternatives will fulfill the purpose of these regulations as outlined in 2CCR§2298.1(a).

(2) If the Division Chief approves any proposed alternatives under this section, a letter of approval shall be issued to the petitioner setting forth the findings upon which the approval is based.

(3) The Division Chief may withdraw the letter of approval of any alternative requirements at any time if he or she finds that the person or persons subject to these regulations have not complied with the approved alternative requirements.

(4) Withdrawal of a letter of approval under this section shall be effective upon receipt by the petitioner of written notification of the withdrawal from the Division Chief.

Authority Cited: Sections 71201, 71201.7 and 71204.6, Public Resources Code

Reference Cited: Sections 71200, 71201, 71201.7, 71204.6, 71204, 71205 and 71207, Public Resources Code